

Appl. No. 09/668,786
Arndt dated June 8, 2004
Reply to Office Action of March 11, 2004

REMARKS

In the Office Action dated March 11, 2004, claims 1-5, 8, 13, 15-19, 21-26, and 29-37 were rejected under 35 U.S.C. § 102(e) over Border (U.S. Publication No. 2002/0071436 A1); claims 6, 7, 9-12, 14, 20, 27, and 28 were rejected under § 103 over Border in view of RFC 2516, entitled "A Method for Transmitting TCP over Ethernet (PPPoE)," dated February 1999 (hereinafter "RFC 2516").

Applicant respectfully submits that Border does not anticipate claim 1. Border describes a performance enhancing proxy (PEP) to perform "TCP spoofing." Border, ¶ [0014]. Border describes TCP spoofing as involving an intermediate network device intercepting and altering, through the addition and/or deletion of TCP segments, the behavior of TCP connections to improve the performance of TCP connections. Border, ¶ [0014]. In rejecting claim 1 as being anticipated by Border, the Office Action identified the "controller" recited in claim 1 as being the PEP disclosed in ¶ [0014] and in Figure 4A of Border. In particular, the Office Action referenced the local PEP endpoint 402. The Office Action asserted that the MSS (maximum segment size) value received in a TCP SYN segment (disclosed in ¶ [0014] of Border) constitutes the indication of size for a data portion of a first message recited in claim 1. Also, the Office Action stated that ¶ [0275] of Border discloses the controller being adapted to modify the indication to indicate a different size for the data portion.

Applicant respectfully disagrees with the assertion that Border teaches a controller to modify the indication (in a received first message) of a size of a data portion to indicate a different size for the data portion of the first message. Paragraph [0275] of Border describes tasks of a PEP performed in response to detecting an MSS mismatch, which occurs when a remote node reports a maximum supportable MSS value that is less than the MSS value sent by the PEP. In response to MSS mismatch, the PEP sends a message, referred to as a "datagram too big" message, back to the originating host. The "datagram too big" message includes an indication of the maximum supportable data size of the next hop in the network. Thus, the "datagram too big" message is an indication provided from the PEP to the originating host that the requested size for messages by the originating host is too large (the size cannot be handled by the remote node). See Border, ¶ [0276]. This causes the originating host to break original TCP data segments into

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smaller segments for retransmission. In sending the "datagram too big" message by the PEP to the host, the PEP does not perform the following combination of acts: receiving a message containing an indication of size of a data portion, and modifying the indication of the received message.

In response to the "datagram too big" message, the originating host retransmits data segments in smaller segments: the retransmission of data segments in smaller segments by the host also does not constitute a controller receiving a first message that contains an indication of a size of a data portion, with the controller being able to modify the indication in the received first message to indicate a different size.

Therefore, it is respectfully submitted that Border does not disclose the subject matter of claim 1.

Claim 16 was also rejected as being anticipated by Border. Claim 16 recites a method of indicating a message size that includes receiving (from a first network element) a first message *to establish a connection* between the first network element and a second network element, the first message containing an indication of a length of a data portion for messages to be communicated between the first and second network elements. The method further includes adjusting a value of the indication to indicate a different length, and sending a second message to the second network element to establish a connection between the first and second network elements, with the second message containing the adjusted value of the indication.

As discussed above, Border does not disclose adjusting a value of an indication of a received first message to indicate a different length of a data portion for messages between first and second network elements. Moreover, Border does not disclose adjusting a value of the indication contained in a first message *to establish a connection between first and second network elements*. In addition, Border fails to disclose sending a second message to the second network element *to establish a connection* between the first and second network elements, where the second message *contains the adjusted value of the indication*.

Independent claim 23 was also rejected as being anticipated by Border. Clam 23 recites an article that includes at least one storage medium containing instructions that when executed cause a system to: receive (from a first network element) a first message

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containing an indication of a size of a data portion for messages to be communicated between first and second network elements; modify the indication to indicate a different size; and send a second message in response to the first message, the second message containing the modified indication. As discussed above, Border does not disclose modifying an indication in a received first message to indicate a different size of a data portion for messages communicated between first and second network elements. Nor does Border disclose sending a second message in response to the first message, where the second message contains the modified indication.

Independent claim 31 is allowable for reasons similar to those for claim 23.

Independent claim 32 recites a method of indicating a message size that comprises receiving a message containing a maximum segment size value, determining a maximum data size supportable by a link between the system and another node, and comparing the determined maximum data size with the maximum segment size value. The maximum segment size (*of the received message*) is modified based on the determination. In the Office Action, the modifying act of claim 32 was equated to the TCP Spoofing Kernel adjusting the size of data segments before sending them. *See* 3/11/2004 Office Action at 6. Adjusting the size of data segments is *not* the same as modifying the maximum segment size value *of a received message* that contains the maximum segment size value. As clearly depicted in Figure 36 of Border (which was also referenced on page 6 of the Office Action in rejecting claim 32), the MSS value is contained in the CE message sent from the remote PEP to the local PEP (at 473). The data segment sent at 465 from the local PEP to the remote PEP has 1000 bytes of data. The 1000 bytes of data is divided into two segments each with 500 bytes of data, which are sent from the remote PEP to the remote host 406 (at 469, 471). However, breaking the 1000-byte data segment sent at 465 into two 500-byte segments sent at 469, 471 does not constitute modifying the maximum segment size value contained in a received message

Therefore, Border does not disclose the subject matter of claim 32.

Independent claims 36 and 37 are similarly allowable over Border.

Dependent claims are allowable for at least the same reasons as corresponding independent claims. Moreover, with respect to newly added claim 38, which depends from claim 1, Border does not disclose that the first message comprises a message to

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establish a connection between first and second network elements, where the message to establish the connection contains the indication of the size of the data portion. Border also does not disclose a controller adapted to transmit a second message to establish the connection between the first and second network elements in response to the first message, with the second message containing the modified indication.

With respect to newly added claim 40, which depends from claim 23, there is no indication in Border of receiving a first message (that contains the indication of size) to establish a session between first and second network elements, and sending a second message containing the modified indication to establish the session between the first and second network elements.

Dependent, claims 6, 7, 9-12, 14, 20, 27, and 28 were rejected as being obvious over Border and RFC 2516. In view of the defective application of Border to the respective base claims, it is respectfully submitted that the obviousness rejections are also defective.

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees, including extension of time fees, and/or credit any overpayment to Deposit Account No. 20-1504 (NRB.0005US).

Respectfully submitted,



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